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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/816,474

03/31/2004

Miguel A. Sepulveda

23564-07907

1208

20872 7590 12/19/2006
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EXAMINER

BROOME, SAID A

ART UNIT

PAPER NUMBER

2628

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/19/2006

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/816,474	SEPULVEDA, MIGUEL A.	
	Examiner	Art Unit	
	Said Broome	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-93 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 65-93 is/are allowed.
- 6) ☒ Claim(s) 1-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/3/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/3/06 has been entered.

Response to Amendment

1. This office action is in response to an amendment filed 11/3/2006.
2. Claim 1 has been amended by the applicant.
3. Claims 2-93 are original.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the deformation pipeline must be shown in Figures 1-5 or the feature(s) canceled from the claim(s). No new matter should be entered. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Allowable Subject Matter

Claims 65-93 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art, Milliron (US Patent 6,608,631) and Silva et al.(US Patent 6,061,067), do not teach the limitations of claim 65. Milliron teaches a computer program product for deforming a computer-generated object using inherently using a graphics hardware or deformation pipeline in column 10 lines 11-14, as recited in the preamble. Milliron teaches a computer-readable medium and computer program code, encoded on the medium in column 2 lines 44-48. Milliron teaches converting a geometric representation of an object into a data stream in column 2 lines 51-55 and is also illustrated in Figure 7a as element 7150. Milliron also teaches receiving the data and applying a deformation to the data stream in column 2 lines 55-59 and is also illustrated in Figure 7a as element 7750. Milliron teaches converting the deformed data into a geometric representation of a deformed object in column 3 lines 7-9 and is

illustrated in Figure 7a as element 7850. However, Milliron fails to specifically teach a head node, a plurality of deformation nodes and a tail node. Silva et al. illustrates a head node 210 in Figure 2 that converts a geometric representation of an object as described in column 11 lines 54-55 that is sent to the pipeline 250 through a data stream. Silva et al. also teaches a plurality of deformation nodes in column 4 lines 60-67, which are described to perform deformation on the 3D object, and is also illustrated in Figure 1. Silva et al. teaches a deformation or transformation node 230 that receives data from a node and applies deformation to the data as described in column 11 lines 11-21, and a tail node 270 that converts the deformed data into a geometric representation of a deformed or transformed object as described in column 11 lines 48-53 and 63-66. However, none of the prior art teaches or suggests passing topology information describing the topology makeup of the geometry encoded in the data stream through the plurality of deformation nodes separate from the data stream without altering the topology information, as recited in claim 65.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-64 are rejected under 35 U.S.C. 101.

Claims 1-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 recites a deformation pipeline comprising several nodes, therefore the claim describes a data structure, which is non-statutory. Claim 1 has been amended to embody the nodes into a computer-readable medium. However, the claim subject

matter is still not statutory because it is unclear whether each node is embodied in the same computer-readable medium, or if there are three separate computer-readable mediums each embodying a node. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. A suggested amendment to the claim to enable the claim to recite statutory subject matter would be to amend the preamble of the claim as follows: "A computer readable medium encoded with an animation deformation pipeline, the animation deformation pipeline comprising:", and also, in the body of the claim, delete all amended languages from the claim.

Claims 36-64 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 36 recites "A method for deforming..", however no tangible result is produced. Therefore, the claimed invention does not possess "real world" value. The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that §

101 judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”). In *State Street*, the Federal Circuit examined some of its prior section 101 cases, observing that the claimed inventions in those cases were each for a “practical application of an abstract idea” because the elements of the invention operated to produce a “useful, concrete and tangible result.” *State Street*, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. For example, the court in *State Street* noted that the claimed invention in *Alappat* “constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it produced ‘a useful, concrete and tangible result’—the smooth waveform.” *Id.* Similarly, the claimed invention in *Arrhythmia* “constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation); because it corresponded to a useful, concrete and tangible thing—the condition of a patient’s heart.”

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Said Broome whose telephone number is (571)272-2931. The examiner can normally be reached on 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Ulka Chauhan can be reached on (571)272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2628

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S. Broome
12/14/06 SB


ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER